FIG. 1

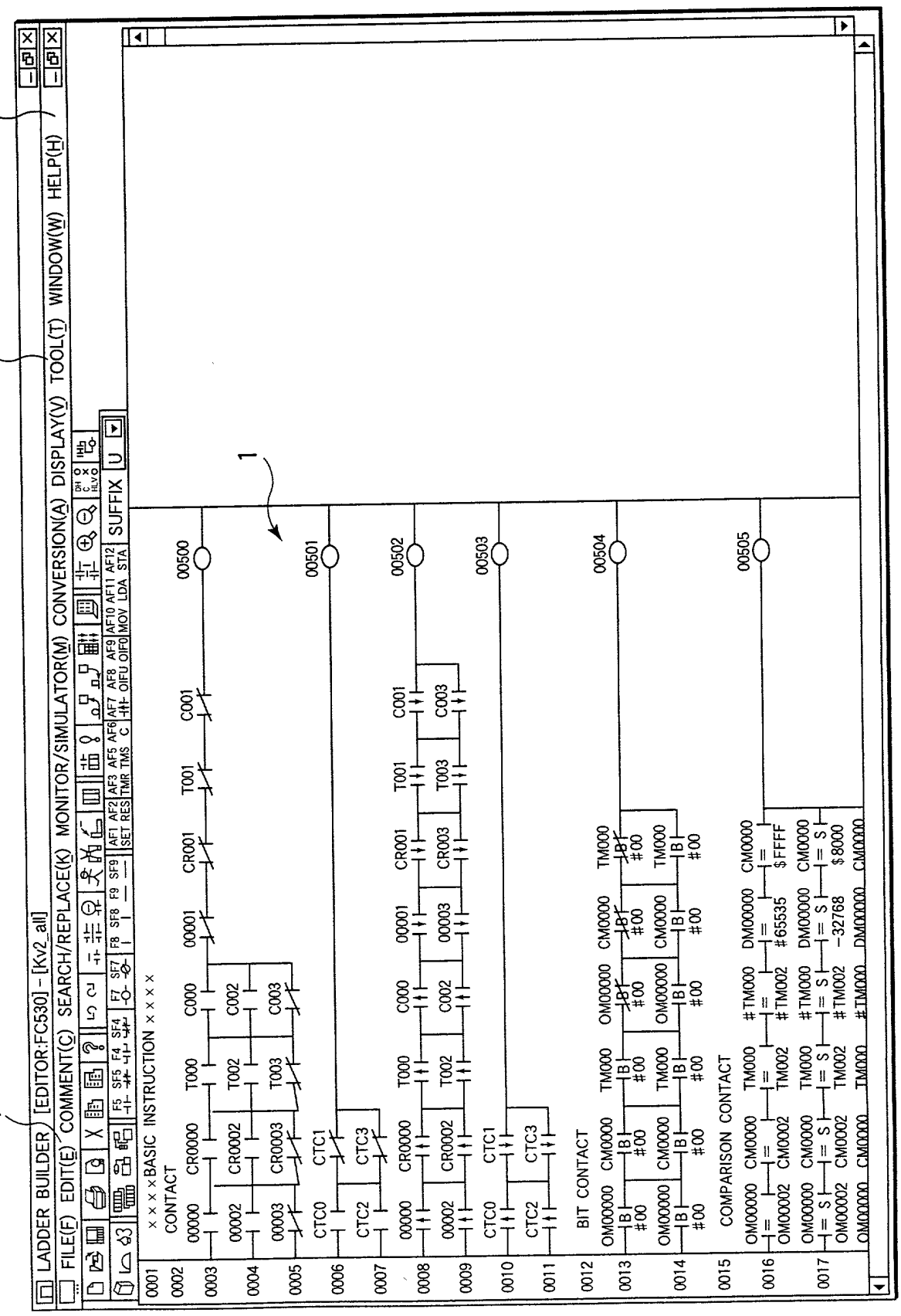
4
20
3
1
LADDER BUILDER [EDITOR:FC530] - [Kv2_all]
FILE(F) EDIT(E) COMMENT(C) SEARCH/REPLACE(K) MONITOR/SIMULATOR(M) CONVERSION(A) DISPLAY(V) TOOL(T) WINDOW(W) HELP(H)
SUFFIX
×××× BASIC INSTRUCTION ××××
CONTACT
BIT CONTACT
COMPARISON CONTACT

FIG. 2

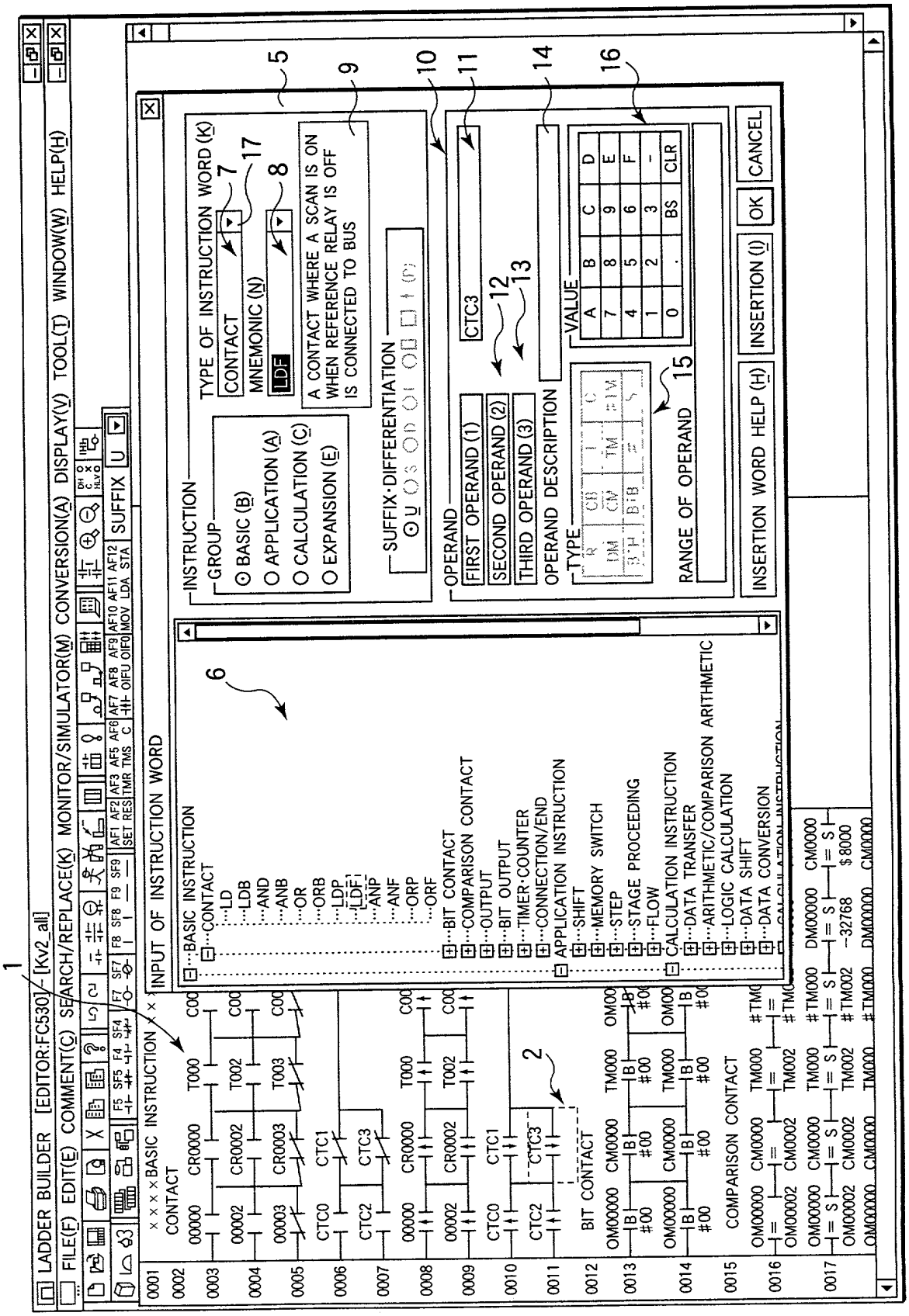
LADDER BUILDER [EDITOR:FC530] - [kv2_all]
FILE(F) EDIT(E) COMMENT(C) SEARCH/REPLACE(K) MONITOR/SIMULATOR(M) CONVERSION(A) DISPLAY(V) TOOL(T) WINDOW(W) HELP(H)
INPUT OF INSTRUCTION WORD
BASIC INSTRUCTION
CONTACT
LD
LDB
AND
ANB
OR
ORB
LDP
LDF
ANP
ANF
ORP
ORF
BIT CONTACT
COMPARISON CONTACT
OUTPUT
BIT OUTPUT
TIMER·COUNTER
CONNECTION/END
APPLICATION INSTRUCTION
SHIFT
MEMORY SWITCH
STEP
STAGE PROCEEDING
FLOW
CALCULATION INSTRUCTION
DATA TRANSFER
ARITHMETIC/COMPARISON ARITHMETIC
LOGIC CALCULATION
DATA SHIFT
DATA CONVERSION
INSTRUCTION
GROUP
BASIC (B)
APPLICATION (A)
CALCULATION (C)
EXPANSION (E)
TYPE OF INSTRUCTION WORD (K)
CONTACT
MNEMONIC (N)
LDF
A CONTACT WHERE A SCAN IS ON WHEN REFERENCE RELAY IS OFF IS CONNECTED TO BUS
SUFFIX·DIFFERENTIATION
SUFFIX
OPERAND
FIRST OPERAND (1)
SECOND OPERAND (2)
THIRD OPERAND (3)
CTC3
OPERAND DESCRIPTION
TYPE
VALUE
RANGE OF OPERAND
INSERTION WORD HELP (H)
INSERTION (I)
OK
CANCEL
1
2
5
6
7
8
9
10
11
12
13
14
15
16
17

FIG. 3

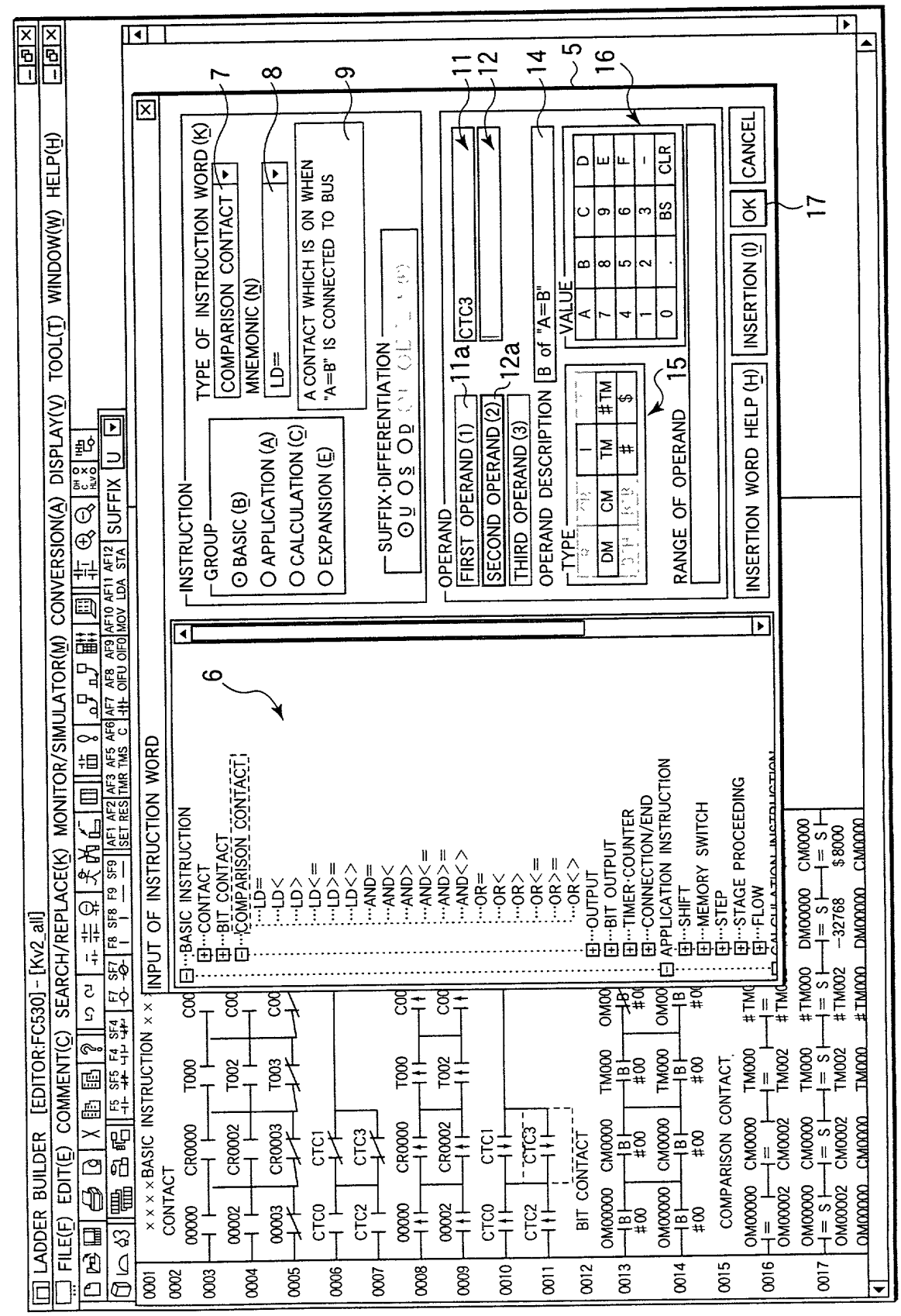
LADDER BUILDER [EDITOR:FC530] - [Kv2_all]
FILE(F) EDIT(E) COMMENT(C) SEARCH/REPLACE(K) MONITOR/SIMULATOR(M) CONVERSION(A) DISPLAY(V) TOOL(T) WINDOW(W) HELP(H)
INPUT OF INSTRUCTION WORD
BASIC INSTRUCTION
CONTACT
BIT CONTACT
COMPARISON CONTACT
OUTPUT
BIT OUTPUT
TIMER·COUNTER
CONNECTION/END
APPLICATION INSTRUCTION
SHIFT
MEMORY SWITCH
STEP
STAGE PROCEEDING
FLOW
INSTRUCTION
GROUP
BASIC (B)
APPLICATION (A)
CALCULATION (C)
EXPANSION (E)
TYPE OF INSTRUCTION WORD (K)
COMPARISON CONTACT
MNEMONIC (N)
LD=
A CONTACT WHICH IS ON WHEN "A=B" IS CONNECTED TO BUS
SUFFIX·DIFFERENTIATION
OPERAND
FIRST OPERAND (1)
SECOND OPERAND (2)
THIRD OPERAND (3)
OPERAND DESCRIPTION
B of "A=B"
TYPE
VALUE
RANGE OF OPERAND
INSERTION WORD HELP (H)
INSERTION (I)
OK
CANCEL
6
7
8
9
11
12
14
5
16
11a
12a
15
17

FIG. 4

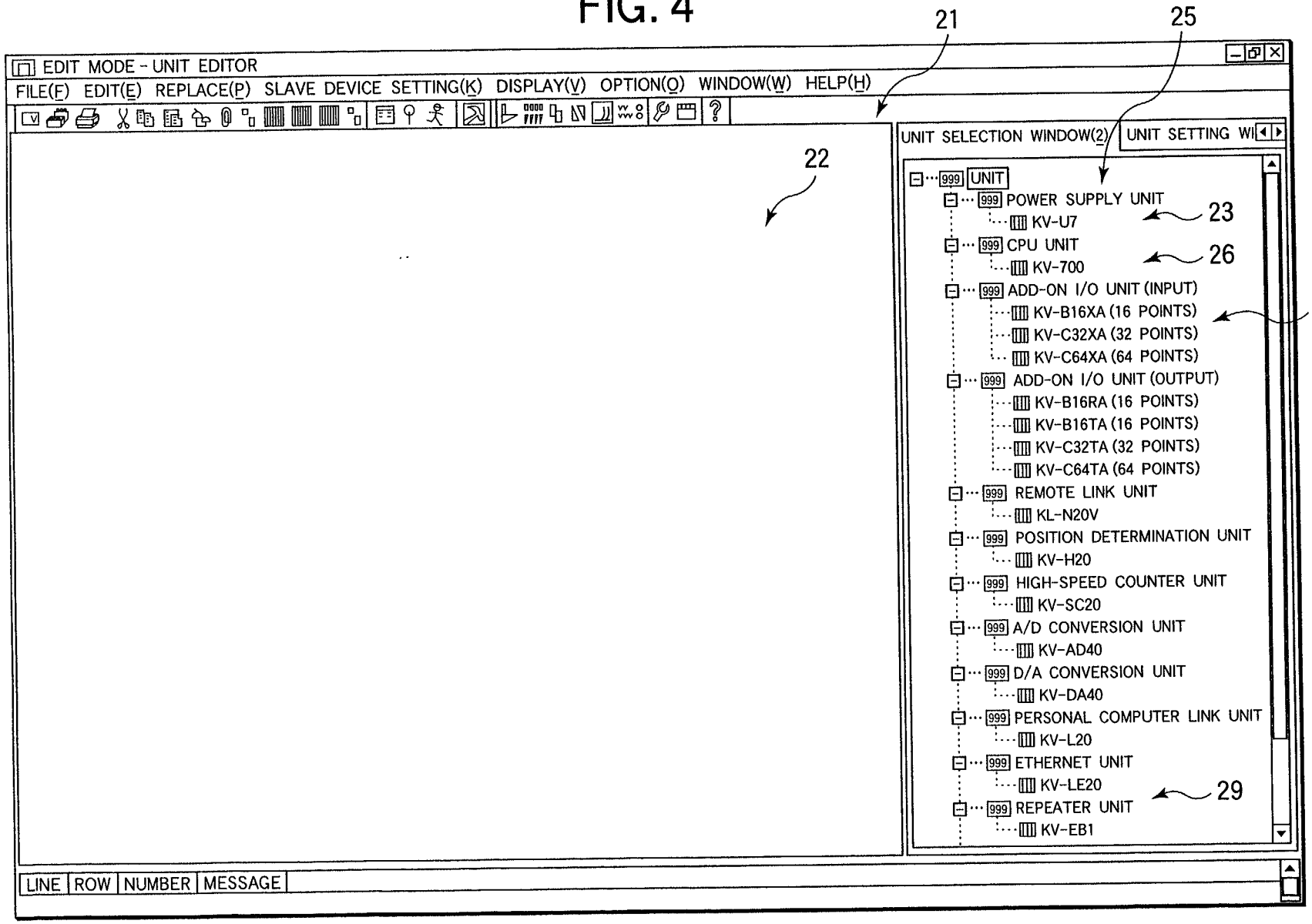
21
25
EDIT MODE - UNIT EDITOR
FILE(F) EDIT(E) REPLACE(P) SLAVE DEVICE SETTING(K) DISPLAY(V) OPTION(O) WINDOW(W) HELP(H)
22
UNIT SELECTION WINDOW(2)
UNIT SETTING WI
UNIT
POWER SUPPLY UNIT
KV-U7
23
CPU UNIT
KV-700
26
ADD-ON I/O UNIT (INPUT)
KV-B16XA (16 POINTS)
KV-C32XA (32 POINTS)
KV-C64XA (64 POINTS)
27
ADD-ON I/O UNIT (OUTPUT)
KV-B16RA (16 POINTS)
KV-B16TA (16 POINTS)
KV-C32TA (32 POINTS)
KV-C64TA (64 POINTS)
REMOTE LINK UNIT
KL-N20V
POSITION DETERMINATION UNIT
KV-H20
HIGH-SPEED COUNTER UNIT
KV-SC20
A/D CONVERSION UNIT
KV-AD40
D/A CONVERSION UNIT
KV-DA40
PERSONAL COMPUTER LINK UNIT
KV-L20
ETHERNET UNIT
KV-LE20
29
REPEATER UNIT
KV-EB1
LINE
ROW
NUMBER
MESSAGE

FIG. 5

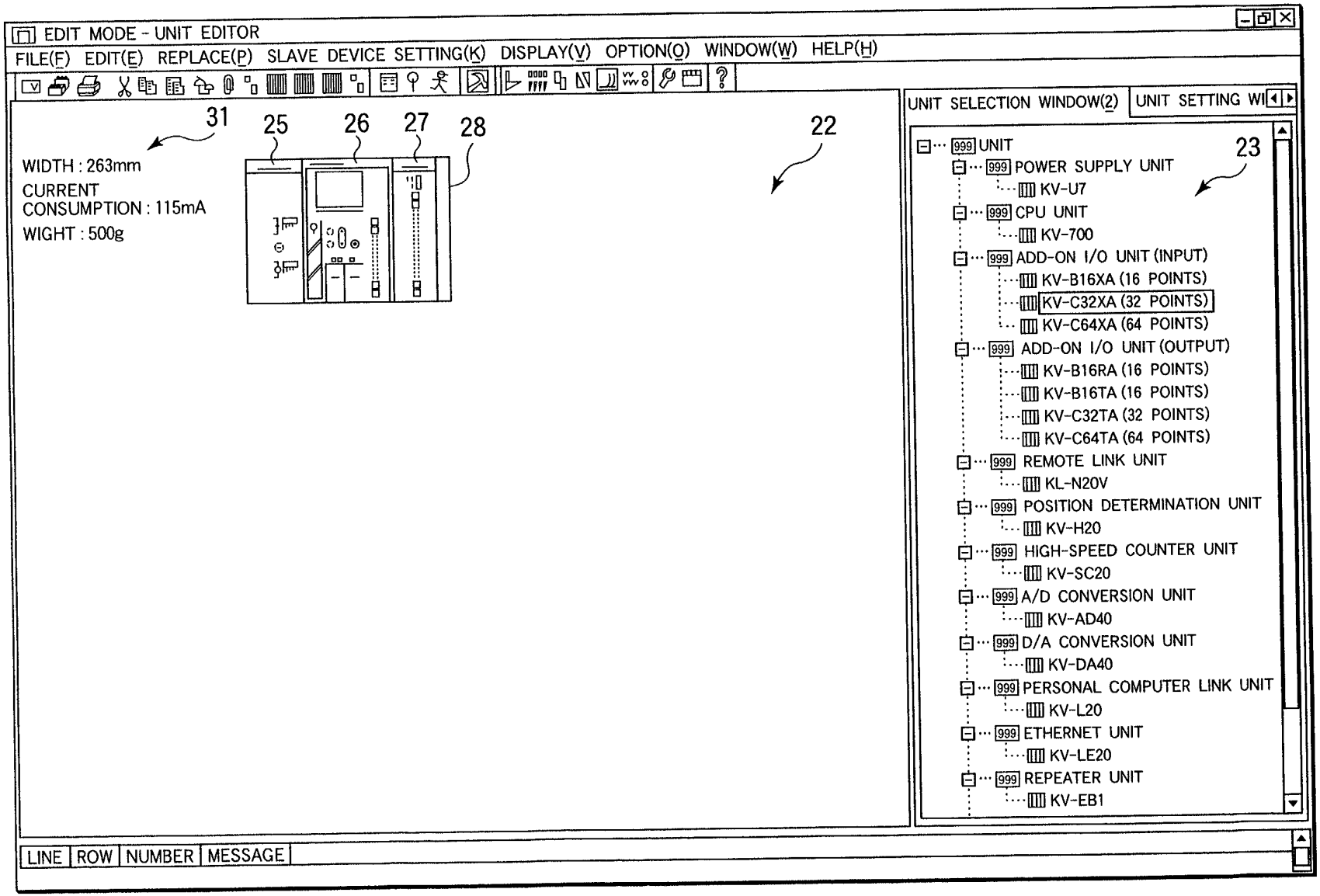
EDIT MODE - UNIT EDITOR
FILE(F) EDIT(E) REPLACE(P) SLAVE DEVICE SETTING(K) DISPLAY(V) OPTION(O) WINDOW(W) HELP(H)
31
25
26
27
28
22
WIDTH : 263mm
CURRENT CONSUMPTION : 115mA
WIGHT : 500g
UNIT SELECTION WINDOW(2)
UNIT SETTING WI
23
999 UNIT
999 POWER SUPPLY UNIT
KV-U7
999 CPU UNIT
KV-700
999 ADD-ON I/O UNIT (INPUT)
KV-B16XA (16 POINTS)
KV-C32XA (32 POINTS)
KV-C64XA (64 POINTS)
999 ADD-ON I/O UNIT (OUTPUT)
KV-B16RA (16 POINTS)
KV-B16TA (16 POINTS)
KV-C32TA (32 POINTS)
KV-C64TA (64 POINTS)
999 REMOTE LINK UNIT
KL-N20V
999 POSITION DETERMINATION UNIT
KV-H20
999 HIGH-SPEED COUNTER UNIT
KV-SC20
999 A/D CONVERSION UNIT
KV-AD40
999 D/A CONVERSION UNIT
KV-DA40
999 PERSONAL COMPUTER LINK UNIT
KV-L20
999 ETHERNET UNIT
KV-LE20
999 REPEATER UNIT
KV-EB1
LINE
ROW
NUMBER
MESSAGE

FIG. 6

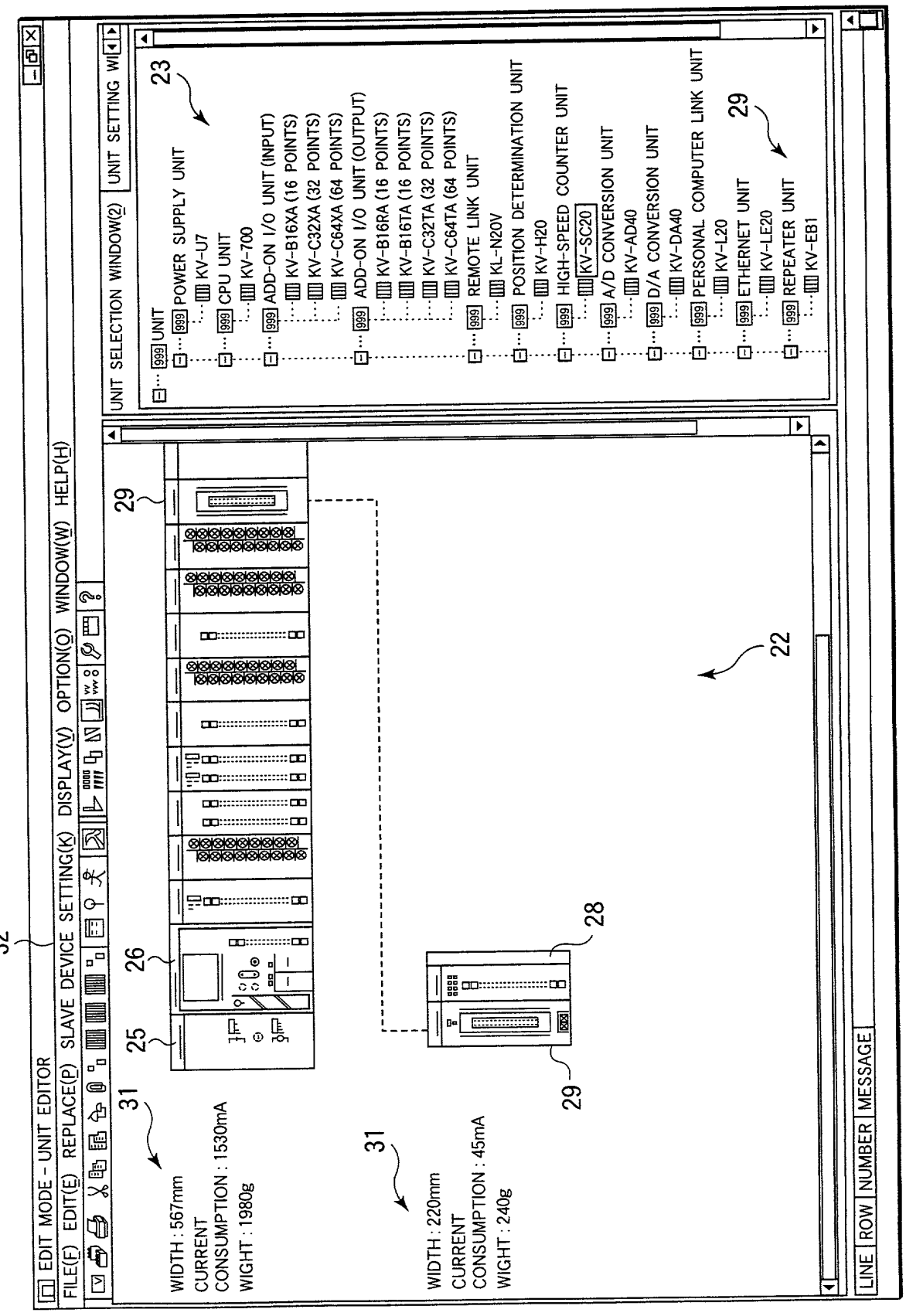
32
EDIT MODE - UNIT EDITOR
FILE(F) EDIT(E) REPLACE(P) SLAVE DEVICE SETTING(K) DISPLAY(V) OPTION(O) WINDOW(W) HELP(H)
UNIT SELECTION WINDOW(2)
UNIT SETTING WI
23
999 UNIT
999 POWER SUPPLY UNIT
KV-U7
999 CPU UNIT
KV-700
999 ADD-ON I/O UNIT (INPUT)
KV-B16XA (16 POINTS)
KV-C32XA (32 POINTS)
KV-C64XA (64 POINTS)
999 ADD-ON I/O UNIT (OUTPUT)
KV-B16RA (16 POINTS)
KV-B16TA (16 POINTS)
KV-C32TA (32 POINTS)
KV-C64TA (64 POINTS)
999 REMOTE LINK UNIT
KL-N20V
999 POSITION DETERMINATION UNIT
KV-H20
999 HIGH-SPEED COUNTER UNIT
KV-SC20
999 A/D CONVERSION UNIT
KV-AD40
999 D/A CONVERSION UNIT
KV-DA40
999 PERSONAL COMPUTER LINK UNIT
KV-L20
999 ETHERNET UNIT
KV-LE20
999 REPEATER UNIT
KV-EB1
29
22
29
28
26
25
29
31
WIDTH : 567mm
CURRENT CONSUMPTION : 1530mA
WIGHT : 1980g
31
WIDTH : 220mm
CURRENT CONSUMPTION : 45mA
WIGHT : 240g
LINE
ROW
NUMBER
MESSAGE

FIG. 7

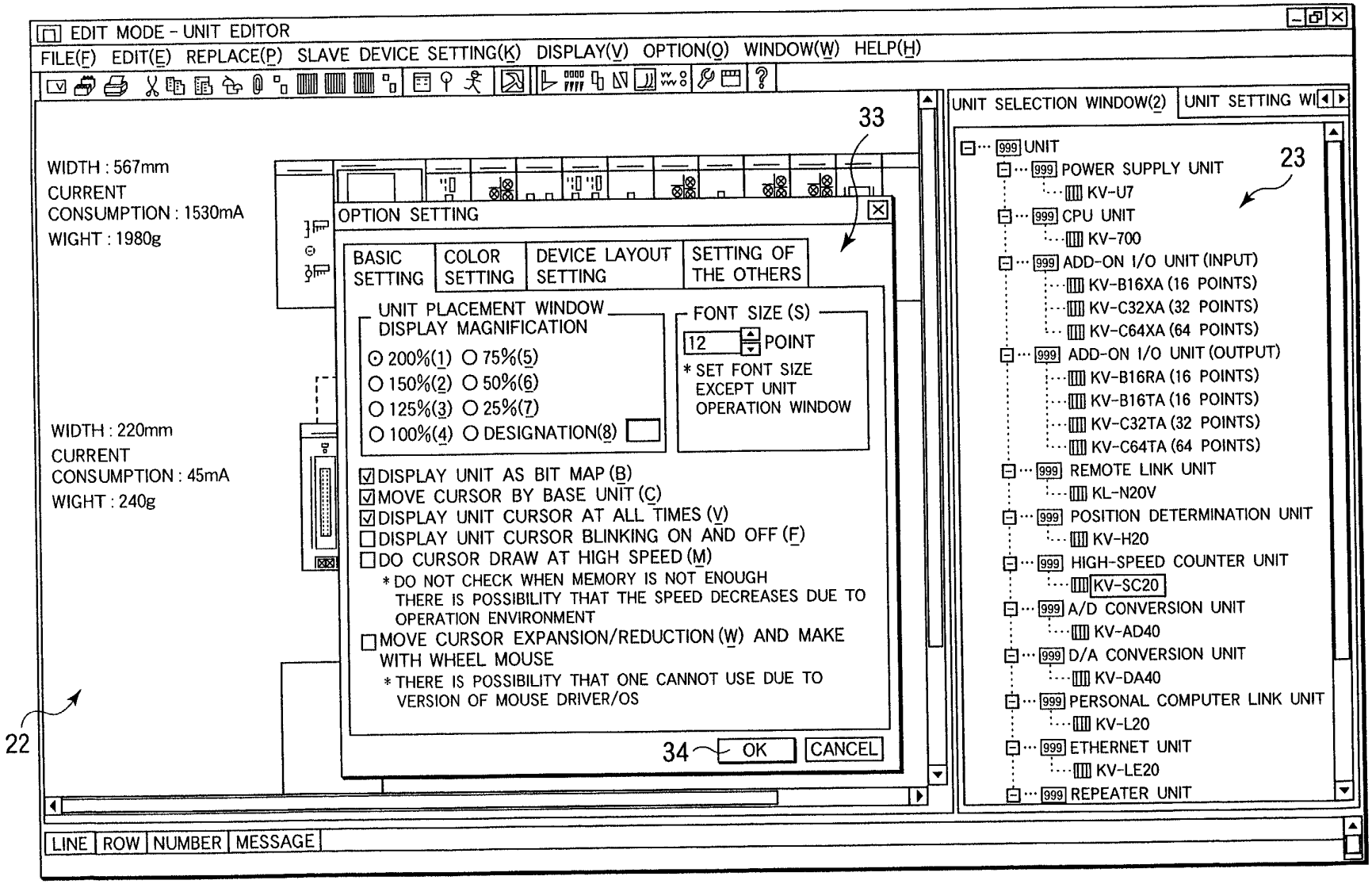
EDIT MODE - UNIT EDITOR
FILE(F) EDIT(E) REPLACE(P) SLAVE DEVICE SETTING(K) DISPLAY(V) OPTION(O) WINDOW(W) HELP(H)
WIDTH : 567mm
CURRENT CONSUMPTION : 1530mA
WIGHT : 1980g
WIDTH : 220mm
CURRENT CONSUMPTION : 45mA
WIGHT : 240g
22
33
OPTION SETTING
BASIC SETTING
COLOR SETTING
DEVICE LAYOUT SETTING
SETTING OF THE OTHERS
UNIT PLACEMENT WINDOW DISPLAY MAGNIFICATION
200%(1) 75%(5)
150%(2) 50%(6)
125%(3) 25%(7)
100%(4) DESIGNATION(8)
FONT SIZE (S)
12 POINT
* SET FONT SIZE EXCEPT UNIT OPERATION WINDOW
DISPLAY UNIT AS BIT MAP (B)
MOVE CURSOR BY BASE UNIT (C)
DISPLAY UNIT CURSOR AT ALL TIMES (V)
DISPLAY UNIT CURSOR BLINKING ON AND OFF (F)
DO CURSOR DRAW AT HIGH SPEED (M)
* DO NOT CHECK WHEN MEMORY IS NOT ENOUGH THERE IS POSSIBILITY THAT THE SPEED DECREASES DUE TO OPERATION ENVIRONMENT
MOVE CURSOR EXPANSION/REDUCTION (W) AND MAKE WITH WHEEL MOUSE
* THERE IS POSSIBILITY THAT ONE CANNOT USE DUE TO VERSION OF MOUSE DRIVER/OS
34
OK
CANCEL
UNIT SELECTION WINDOW(2)
UNIT SETTING WI
23
999 UNIT
999 POWER SUPPLY UNIT
KV-U7
999 CPU UNIT
KV-700
999 ADD-ON I/O UNIT (INPUT)
KV-B16XA (16 POINTS)
KV-C32XA (32 POINTS)
KV-C64XA (64 POINTS)
999 ADD-ON I/O UNIT (OUTPUT)
KV-B16RA (16 POINTS)
KV-B16TA (16 POINTS)
KV-C32TA (32 POINTS)
KV-C64TA (64 POINTS)
999 REMOTE LINK UNIT
KL-N20V
999 POSITION DETERMINATION UNIT
KV-H20
999 HIGH-SPEED COUNTER UNIT
KV-SC20
999 A/D CONVERSION UNIT
KV-AD40
999 D/A CONVERSION UNIT
KV-DA40
999 PERSONAL COMPUTER LINK UNIT
KV-L20
999 ETHERNET UNIT
KV-LE20
999 REPEATER UNIT
LINE
ROW
NUMBER
MESSAGE

FIG. 8

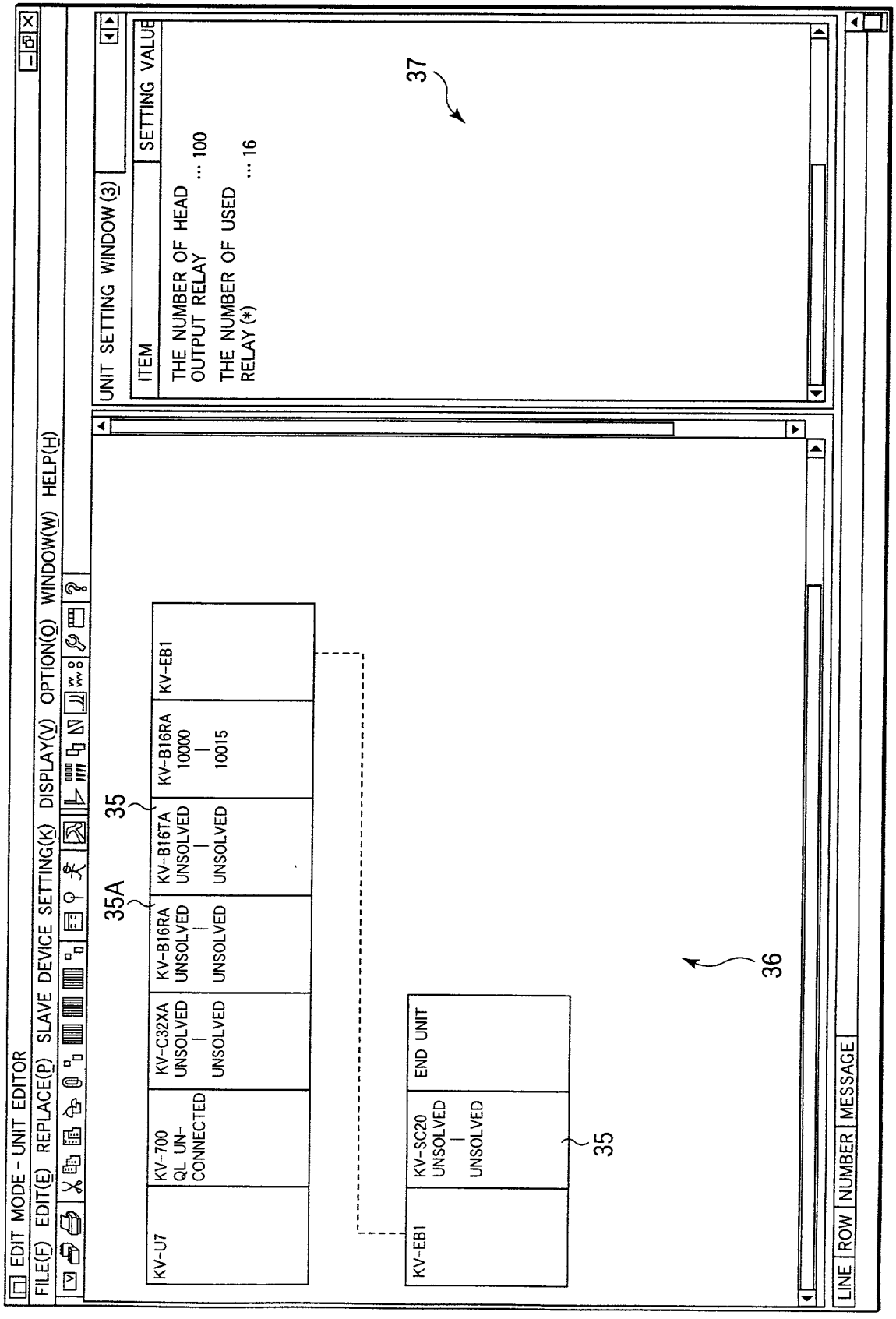
EDIT MODE - UNIT EDITOR
FILE(F) EDIT(E) REPLACE(P) SLAVE DEVICE SETTING(K) DISPLAY(V) OPTION(O) WINDOW(W) HELP(H)
UNIT SETTING WINDOW (3)
ITEM
SETTING VALUE
THE NUMBER OF HEAD OUTPUT RELAY ... 100
THE NUMBER OF USED RELAY (*) ... 16
37
KV-U7
KV-700 QL UN-CONNECTED
KV-C32XA UNSOLVED | UNSOLVED
KV-B16RA UNSOLVED | UNSOLVED
KV-B16TA UNSOLVED | UNSOLVED
KV-B16RA 10000 | 10015
KV-EB1
35A
35
KV-EB1
KV-SC20 UNSOLVED | UNSOLVED
END UNIT
35
36
LINE
ROW
NUMBER
MESSAGE

FIG. 9

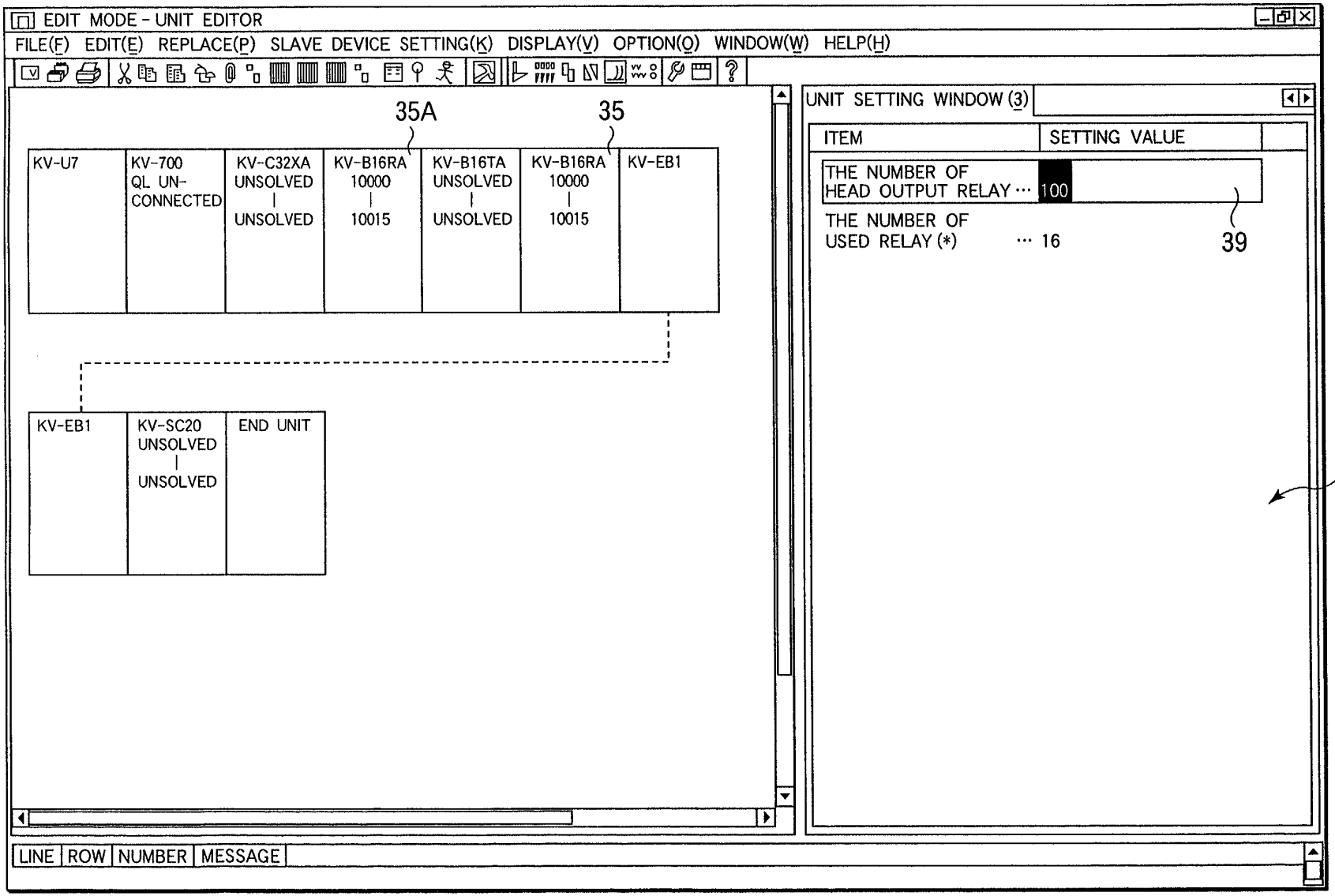
EDIT MODE - UNIT EDITOR
FILE(F) EDIT(E) REPLACE(P) SLAVE DEVICE SETTING(K) DISPLAY(V) OPTION(O) WINDOW(W) HELP(H)
35A
35
KV-U7
KV-700 QL UN-CONNECTED
KV-C32XA UNSOLVED | UNSOLVED
KV-B16RA 10000 | 10015
KV-B16TA UNSOLVED | UNSOLVED
KV-B16RA 10000 | 10015
KV-EB1
KV-EB1
KV-SC20 UNSOLVED | UNSOLVED
END UNIT
UNIT SETTING WINDOW (3)
ITEM
SETTING VALUE
THE NUMBER OF HEAD OUTPUT RELAY ··· 100
THE NUMBER OF USED RELAY (*) ··· 16
39
37
LINE
ROW
NUMBER
MESSAGE

FIG. 10

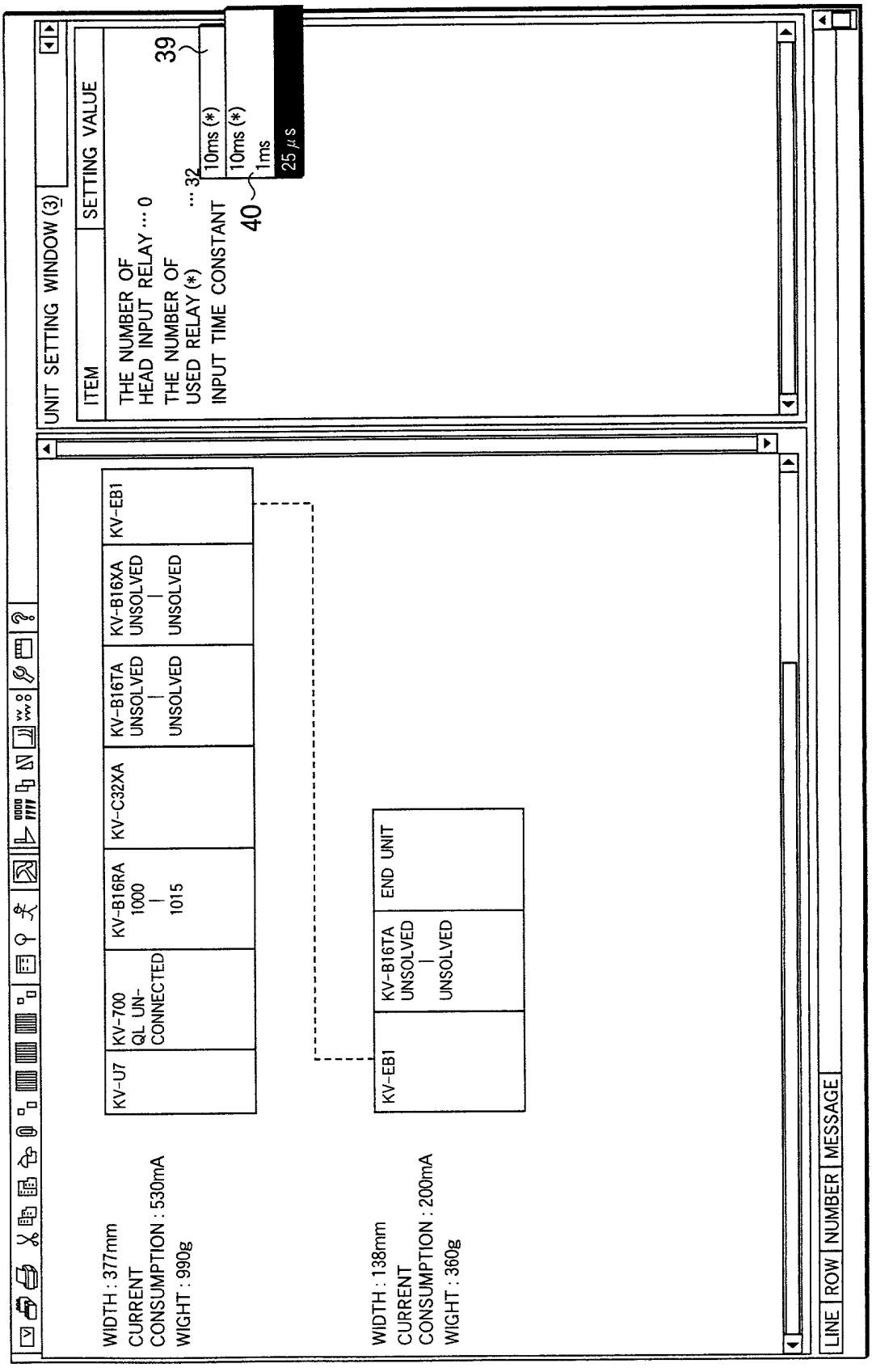
UNIT SETTING WINDOW (3)
ITEM
SETTING VALUE
THE NUMBER OF HEAD INPUT RELAY ··· 0
THE NUMBER OF USED RELAY (*) ··· 32
INPUT TIME CONSTANT
10ms (*)
10ms (*)
1ms
25 μs
39
40
KV-U7
KV-700 QL UN-CONNECTED
KV-B16RA 1000 — 1015
KV-C32XA
KV-B16TA UNSOLVED — UNSOLVED
KV-B16XA UNSOLVED — UNSOLVED
KV-EB1
WIDTH : 377mm
CURRENT CONSUMPTION : 530mA
WIGHT : 990g
KV-EB1
KV-B16TA UNSOLVED — UNSOLVED
END UNIT
WIDTH : 138mm
CURRENT CONSUMPTION : 200mA
WIGHT : 360g
LINE
ROW
NUMBER
MESSAGE

FIG.11

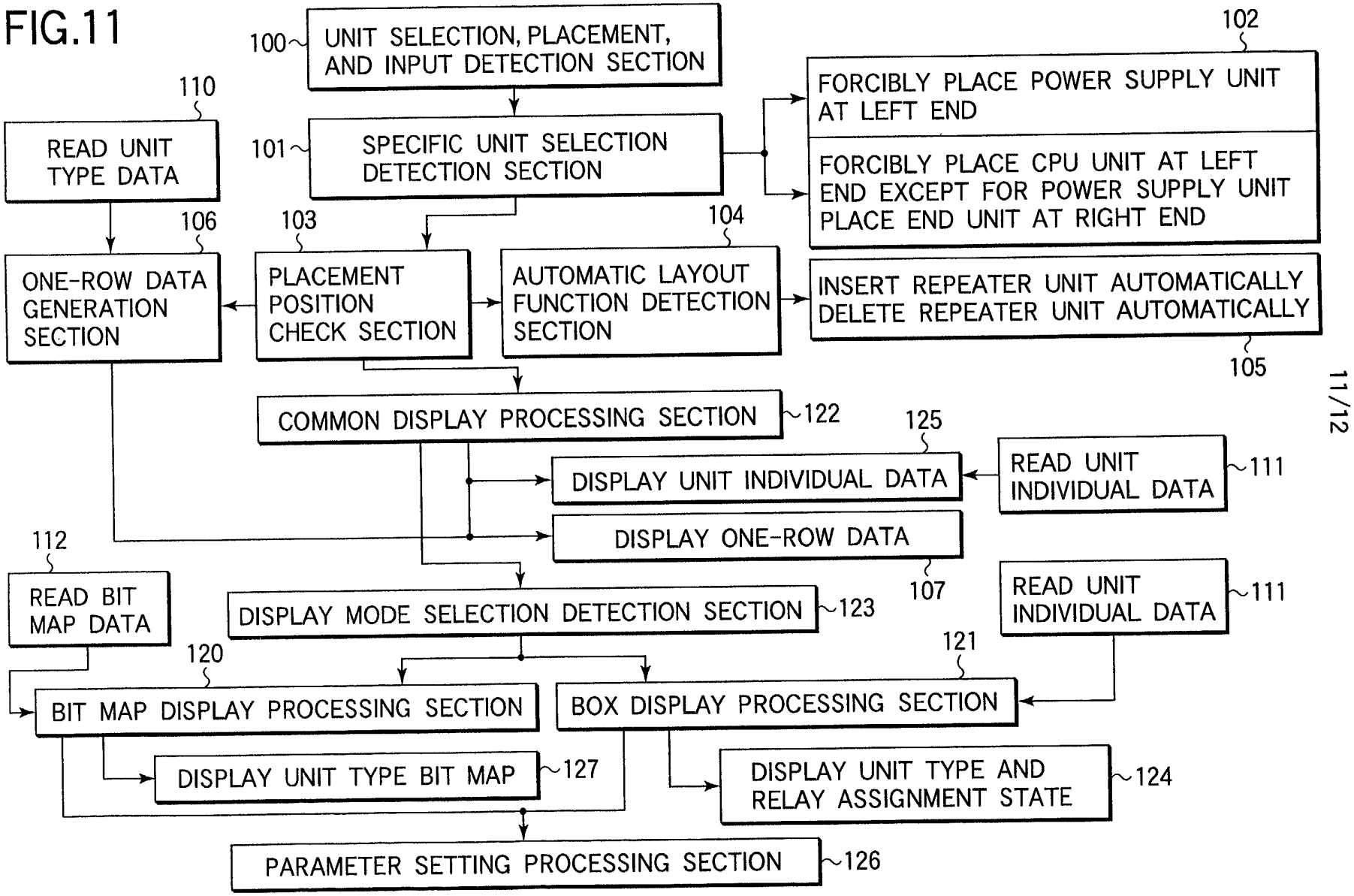
100
UNIT SELECTION, PLACEMENT, AND INPUT DETECTION SECTION
101
SPECIFIC UNIT SELECTION DETECTION SECTION
102
FORCIBLY PLACE POWER SUPPLY UNIT AT LEFT END
FORCIBLY PLACE CPU UNIT AT LEFT END EXCEPT FOR POWER SUPPLY UNIT PLACE END UNIT AT RIGHT END
110
READ UNIT TYPE DATA
106
ONE-ROW DATA GENERATION SECTION
103
PLACEMENT POSITION CHECK SECTION
104
AUTOMATIC LAYOUT FUNCTION DETECTION SECTION
INSERT REPEATER UNIT AUTOMATICALLY DELETE REPEATER UNIT AUTOMATICALLY
105
COMMON DISPLAY PROCESSING SECTION
122
125
DISPLAY UNIT INDIVIDUAL DATA
READ UNIT INDIVIDUAL DATA
111
DISPLAY ONE-ROW DATA
107
112
READ BIT MAP DATA
DISPLAY MODE SELECTION DETECTION SECTION
123
READ UNIT INDIVIDUAL DATA
111
120
121
BIT MAP DISPLAY PROCESSING SECTION
BOX DISPLAY PROCESSING SECTION
DISPLAY UNIT TYPE BIT MAP
127
DISPLAY UNIT TYPE AND RELAY ASSIGNMENT STATE
124
PARAMETER SETTING PROCESSING SECTION
126

FIG.12

110

UNIT TYPE DATA FILE		
16-POINT INPUT UNIT	32-POINT OUTPUT UNIT	POSITIONING UNIT
WIDTH OF UNIT	WIDTH OF UNIT	WIDTH OF UNIT
WEIGHT	WEIGHT	WEIGHT
CURRENT CONSUMPTION	CURRENT CONSUMPTION	CURRENT CONSUMPTION
CORRESPONDING BIT MAP ADDRESS	CORRESPONDING BIT MAP ADDRESS	CORRESPONDING BIT MAP ADDRESS

FIG.13

INDIVIDUAL DATA FILE
IDENTIFICATION NUMBER
UNIT TYPE
ASSIGNED RELAYS
OPERATION CONDITION PARAMETER

111

FIG.14

112

BIT MAP DATA FILE		
16-POINT INPUT UNIT	32-POINT OUTPUT UNIT	POSITIONING UNIT